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PROCEEDINGS OF SOCIETIES.
CAMBRIDGE ENTOMOLOGICAL CLUB.

(Continued from p. 245.)

11 FEB. 1881.—74th meeting (continued).

Mr. W: Trelease described his observations of the manner in which a male and female *Cicada* approached each other. The male remained stationary until the female, attracted by his stridulation, flew to him and alighted in a position facing him. The male then walked past the female until the two were back to back. Mr. S: H. Scudder said that prior to the copulation of the sexes of *Argynnis atlantis*, the male follows the female half way in her rear, so that the bodies of the two overlap side by side. The female, in moving, makes a quick start forward for a few steps; then the male does the same.

Mr. Trelease recorded the capture of *Anthidium cognatum* in Maryland, near the Potomac River. This species had not hitherto been observed north of Georgia. He then gave an account of his observations on the number of times in succession that *Vespa maculata* can give a poisonous sting. He hired a negro boy to allow himself to be stung at ten cents a sting. Taking the wasp between his fingers, Mr. T. pressed her first upon the back of the boy's left hand, then upon the right arm, then upon the lower lobe of the right ear, and then upon the left ear. In

each case the wasp inflicted a poisonous sting so that the wound became swollen; and as the powers of neither the wasp or the boy seemed to diminish as rapidly as the contents of the experimenter's purse, the experiment was discontinued. In Mr. T.'s opinion the sting is not stiff enough to pierce the skin of the inside of the finger tip, so that the wasp may be picked up with impunity. Mr. G: M. Dimmock said he had observed in a similar case that a second puncture with a wasp's sting did not cause so much swelling as the first. Mr. Trelease said that the sting of *Stizus* was not nearly so severe as that of a bee.

Mr. S: H. Scudder exhibited a cast of the first paleozoic insect ever found. This was found at Coalbrookdale, Eng., about 1833, and was described by Audouin as *Corydalis brongniartii*. It was studied anew by Swinton, who called it *Gryllacris*.

11 MAR. 1881.—75th meeting. Prof. J: H: Comstock exhibited drawings and photographs of drawings intended to be used in illustration of the forthcoming report of the Entomologist of the U. S. Department of agriculture, upon the insects injurious to the orange, and particularly upon the *coccidae*. He also gave an account of the work of his division, and the plans and principles on which he carried it on.

Mr. S: H. Scudder exhibited a copy of a recent work by Dr. Jousset de Bellesme on the functions of the balancer or haltere in diptera, and gave some account of the contents of the work. He also exhibited a proof sheet of one of the plates in the forthcoming numero of Edwards' Butterflies of North America, illustrating the varieties of *Satyrus alope*, and communicated the request, in behalf of Mr. Edwards, that any person having remarkable varieties of this species would send specimens immediately to Mr. Edwards, so that he might figure them. The next plate to which Mr. E. will devote his attention is that of *Satyrus nephele*.

Mr. Scudder spoke of his experiences in finding museum pests (*Anthrenus varius*) in old boxes which had not been used for many years, and had been cleaned frequently. This

called out mentions of similar experiences from Dr. H. A. Hagen and others. Mr. B: P. Mann said that he had no apprehension of being unable to free any infested collection from pests. It is necessary, however, to devote frequent attention to the collections.

8 APR. 1881. — 76th meeting. Mr. S: H. Scudder exhibited proofs of nearly twenty plates of engravings of fossil insects, prepared for one of the forthcoming volumes of Hayden's Geological and geographical survey of the territories. Nearly all the original drawings were made by Mr. J. H. Blake, and the lithographing was all done in Sinclair's establishment at Philadelphia. All but the first ten plates represented fossils from Florissant. Mr. Scudder stated some of the preliminary conclusions, in regard to the venation of the wings, to which he had arrived, as a result of his study of fossil insects.

13 MAY 1881.—77th meeting. Mr. S: H. Scudder exhibited plates containing figures of fossil species of *Termes*, and remarked upon the structural features of the species.

A communication was read, from the Middlesex Institute, of Malden, Mass., announcing the formation and organization of the Institute. Mr. E: P. Austin gave notice of an expedition which he was about to make in Arizona and adjacent regions, primarily on business, but collaterally with attention to the insects to be found.

Mr. S: H. Scudder called attention to a paper on the Westphalian species of *Donacia*, in the Jahresbericht der zoologischen Section des westfälischen Provinzial-Vereins für Wissenschaft und Kunst, for 1875.

14 OCT. 1881.—78th meeting. Mr. W: Trelease was elected acting secretary for the remainder of the year, in the absence of Mr. B: P. Mann.

Mr. S: H. Scudder spoke of a series of articles by himself, which was to be published in PSYCHE, on the anatomy of the immature stages of butterflies, mentioning some particulars of larval structure which confirm the growing belief, drawn from the study of

the imago, that the swallow-tails [*papilionidae*] should be placed near the bottom of the scale in classification, near the skippers [*hesperidae*], instead of at the head, where Linnaeus placed them. Remarks by Dr. E: L. Mark led to a discussion of several structural peculiarities of lepidoptera, especially of organs found by Mr. Scudder near the anus of the female pupa of *Danaïs*, and not mentioned by Mr. E: Burgess in his Anatomy of *Danaïs archippus*; these organs recall the odoriferous organs mentioned by Burnett in his translation of Siebold's Comparative anatomy, as occurring in *Argynnis* and other genera.

A question by Mr. F: Gardiner, jr., led to remarks by Dr. E: L. Mark on the defensive organs of *Brachinus* and other insects.

Dr. E: L. Mark spoke of the value of the larvae of *Corethra* for demonstrations of the anatomy of insects, owing to their great transparency. An incidental advantage mentioned is the existence of a very extensive literature upon the subject.

Mr. S: H. Scudder read a letter from Prof. J: H: Comstock concerning an aquatic lepidopterous larva, belonging to the genus *Arzama*. This larva has been found in New York and in Florida; it lives in the petiole of the pond-lily [*Nymphaea odorata*], and is able to remain under the water for a half-hour or longer.

Mr. W: Trelease showed an undescribed *Chionaspis*, found on *Spartina stricta*, at Wood's Holl, Mass. These insects were said to thrive on plants partly submerged in salt water at every high tide, and when collected were wet with salt spray! The coccid had been referred to Prof. J: H: Comstock.

Mr. S: H. Scudder showed larvae of *Sciara*, which had been sent from Natick, Mass., by Mr. W: Edwards. They unite in some way and form a compact body twelve to fifteen decimeters long, and as large as a man's thumb. They move slowly in a snake-like manner. When an attempt is made to lift the chain it breaks, but it reunites if the ends are placed together.

Mr. S: H. Scudder showed two larvae of *Apatura* from Florida, calling attention to their relative position in hibernation, and remarking on their habits.

11 Nov. 1881. — 79th meeting. Mr. W: Trelase showed a specimen of ant-architecture from Wood's Holl, Mass. A small colony of *Crematogaster lincolata* Say, ♂, had built a tube of crumbled wood about a twig of *Andromeda ligustrina*, at a height of twelve or fifteen decimetres from the ground, enclosing a colony of larval aphides, which they defended pugnaciously. The branch being transferred to a room the ants manifested no disposition to leave their charge, occasionally going down, for a drink, to the water in which the twig was kept. They were kept for about two weeks, when all were transferred to alcohol.

Mr. W: Trelase also showed specimens of the white-grub (*Lachnosterna quercina*), from Madison, Wisc., infested with immature *Torrubia*, and remarked on the great destructiveness of the grubs about Madison during the past season.

Mr. S: H. Scudder showed a number of carboniferous fossils, among them an immature specimen of the largest fossil myriapod known, a myriapod provided with gills and showing clearly the aquatic adaptation of some of the group at that time, a greatly elongated cockroach, too imperfect for satisfactory study, and a gigantic arachnid resembling *Chelifer*.

Mr. S: H. Scudder exhibited also a plate of figures of fossil spiders from the tertiary beds of Florissant, Col., and stated the general results he had arrived at from their study. The number of species was greater than in all the stratified tertiary beds of Europe together, and they showed a general affinity to those now living in the southern United States—a *Tetragnatha* and a *Nephila* were present, besides several species of two new genera, one of *epeiridae*, the other an abnormal form of *attidae*, with four instead of two large eyes. The *epeiridae* included nearly half of the total number of species. There was indication of somewhat interest-

ing relations with the amber fauna of Europe.

9 Dec. 1881. — 80th meeting. Dr. H. A. Hagen read a paper on amber *psocina* from Prussia. No fossil *Psocus*, save those from amber, are known. After stating the general results of his study, Dr. Hagen concluded that the amber forms gave reason to believe that before the tertiary times a great development of genera and species had occurred, but the ancestral forms had not been preserved. In the present imperfect state of our knowledge of both fossil and living representatives of the group, it did not seem wise to attempt to trace their evolution.

Remarks were made by Dr. Hagen and Mr. S: H. Scudder, on the causes which influence the imprisonment of insects in amber, and on the reasons for the absence of such groups as *odonata* and *lepidoptera*.

ENTOMOLOGICAL SOCIETY OF LONDON.

2 JUNE 1880. — . . . Mr. Finzi exhibited (on behalf of Mr. Lowrey) an example of *arctia fuliginosa*, in which one antenna was congenitally absent. The president [Sir J: Lubbock] stated that he had occasionally bred ants with only one antenna, and one example with no antennae, this latter being helpless when out of the nest. — The president exhibited an Australian ant, allied to *camponotus*, remarkable for having its abdomen enormously distended (resembling that of a gravid queen termite), so that it was little else than an animated honey-bag. In this it was analogous to another (American) species forming the genus *myrmecocystus* of Wesmael. — *Entom. mo. mag.*, July 1880, v. 17, p. 48.

6 Oct. 1880. — . . . Mr. A. H. Swinton read two papers on the effects of food in producing variability in *lepidoptera*, more especially with regard to *vanessa urticae* and *arctia caja*. — *Entom. mo. mag.*, Dec. 1880, v. 17, p. 167.

2 MAR. 1881. — . . . Mr. [E. A.] Fitch read a detailed report from the "*Western daily mercury*" on the discovery of living Colorado-beetles in possession of a man near Plymouth, with editorial leaders on the legal proceedings taken against that individual.